NOTES, ABSTRACTS, REVIEWS.

Sir Joseph Norman Lockyer, Astronomer and Meteorologist.[1]

[1836–1920.]

[Excerpts from *The Meteorological Magazine*, September, 1920, 55:181–182.]

The death of Sir Norman Lockyer, on August 16, marks the end of the career, not only of a famous astronomer and investigator of the physics of the sun, but also of a keen meteorologist whose claim to fame in that department of natural knowledge will increase as time goes on and "the thoughts of men are widened with the process of the suns."

In science he began as an amateur, for he was educated at various private schools which had no laboratories in those days, and at the age of 21 received an appointment in the War Office. * * * He left the War Office [in 1870] to become secretary of the Duke of Devonshire's Royal Commission on Scientific Instruction and the Advancement of Science. * * *

It was the study of solar physics that brought him into relation with meteorology. Certain indications of relationship between the frequency of sunspots and the phenomena of the earth's atmosphere had been brought forward by Charles Chambers as regards Indian rainfall, and by Charles Meldrum as regards the frequency of tropical revolving storms in the region of Mauritius. * * * To develop the relationship into practical utility required on the one hand the study of the sun, and on the other hand the study of the meteorology of the earth as a whole. The case for this cooperative study was set out by Sir Norman Lockyer at a meeting of the International Meteorological Committee at Southport in 1903, when that committee met simultaneously with the British Association, of which Lockyer was then president. * * *

The meteorological side involved the study of the meteorology of the globe as a whole, and the prosecution of that study required the cooperation of meteorologists all over the world. The work of compilation was intrusted mainly to Dr. W. J. S. Lockyer, Sir Norman's youngest son, and to their activity we owe a number of volumes on the distribution of pressure and rainfall over the globe, the barometric seesaw, the meteorology of Australia, and the circulation of air in the Southern Hemisphere. * * *—*Napier Shaw.*

DR. GEORGE C. SIMPSON SUCCEEDS SIR NAPIER SHAW AS HEAD OF THE METEOROLOGICAL OFFICE.[2]

The retirement of Sir Napier Shaw, Sc. D., LL.D., F. R. S., from the directorship of the Meteorological Office took place on September 6. The Air Council have appointed Dr. George C. Simpson, F. R. S., to succeed him. Dr. Simpson is best known to meteorologists by his theory of thunderstorms and by his work as meteorologist and physicist to the Scott South Polar Expedition, which was discussed by Dr. H. R. Mill in our July number. He has held an appointment on the staff of the Indian Meteorological Department since 1906.

[1] For a much more detailed biographical sketch, see *Nature*, London, Aug. 19, 1920, pp. 781–784.

[2] Reprinted from *The Meteorological Magazine*, September, 1920, 55:164.

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THE UNIFICATION OF THE METEOROLOGICAL SERVICES OF BRITAIN.[1]

The unification of the national meteorological services was completed on August 12, 1920, on which date the special meteorological service established during the war at the Admiralty was incorporated with the Meteorological Office. The Air Ministry has thus become responsible for all branches of official meteorological work.

METEOROLOGY AT THE BRITISH ASSOCIATION MEETING AT CARDIFF, AUGUST 24–27, 1920.

[Excerpts from *The Meteorological Magazine*, September, 1920, 55: 169–172.]

There was very little sign of activity in meteorology in the program of papers prepared for the meeting of the British Association at Cardiff this year. * * *

A paper was presented by Prof. S. Chapman[1] on "Terrestrial Magnetism, Aurorae, Solar Disturbance and the Upper Atmosphere," a further development of the subject so well set out in a recent paper before the Royal Meteorological Society. In Section B (Chemistry) Dr. J. S. Owens gave an account of the recent work of the Committee on Atmospheric Pollution in the investigation of the acid impurities of the atmosphere. * * *

THE SPECTRUM AND THE THEORY OF THE GREEN FLASH.

By A. DANJON AND G. ROUGIER.

[Abstracted from *Comptes Rendus*, Paris Academy, Oct. 26, 1920, 171: 814–817.]

In favorable cases, it is possible to see the disk of the setting sun bordered by a red and a green fringe during 10 minutes preceding disappearance; special spectrophotographic arrangements show that the spectra of the setting sun and the green fringe differ only in the suppression of the red, and conversely the spectrum of the lower edge shows only the extreme red. These observations decide definitely in favor of the atmospheric dispersion theory of the green flash, and against the anomalous dispersion theory of Julius, for the numerous sharp telluric lines have the same aspect in the spectrum of the green flash as in that of the solar disk. Certain peculiar conditions, whose existence is made manifest in the appearance of the green flash, cause a momentary enlargement and brightening of the flash, giving it a duration of a few seconds, instead of only a few tenths of a second as Julius holds would result.

Brewster's bands reduce the spectrum to practically green and red, separated by atmospheric dispersion, thus causing the sharp limits to the fringes about the sun; the green flash is much easier to see when Brewster's bands are intense. The phenomenon is greatly modified by the condition of the atmosphere, etc.; all the most favorable conditions for being able to observe it are united over a sea horizon, but also frequently occur in other localities.—*E. W. W.*

[1] *See* MO. WEA. REVIEW, December, 1919, 47: 879, "Electrical phenomena in the upper atmosphere," by S. Chapman.